A Before/After Trial of a Decision Aid on Mammography Screening for Women Aged 75 and Older

Mara A. Schonberg1, Mary Beth Hamel1, Roger B. Davis1, Edward R. Marcantonio1; 1. Medicine, Beth Israel Deaconess Medical Center, Boston, MA, United States.

Background: Guidelines state there is insufficient evidence to recommend mammography screening for women aged >75 years. Instead, they encourage clinicians to discuss the potential benefits and risks of screening and engage older women in shared decision-making. We aimed to design and evaluate a decision aid (DA) for women >75 years to inform their decision-making around mammography screening.

Methods: We designed the DA based on international standards and included data from medical literature review. An expert panel reviewed iterative versions of the DA and it was then reviewed for acceptability by 15 patients and 5 of their primary care physicians (PCPs). The 10-page DA (written at a 6th grade reading level) includes information on breast cancer risk, life expectancy, competing mortality risks, likely outcomes if screened or not screened over 5 years, and a values clarification exercise. We evaluated the DA in a before/after trial at a large academic primary care practice in Boston. Eligible women were >75 years, spoke and read English fluently, had not had a mammogram in the past 9 months but were screened in the past 3 years, did not have a history of invasive or non-invasive breast cancer or dementia, and were scheduled for a routine visit with their PCP within 8 weeks. Participants came early to their PCP appointment to complete a “before” survey and to read the DA. After the visit, they completed an “after” survey. The surveys included 10 knowledge questions, the 16-item decisional conflict scale (DCS, 0-100, lower scores= less conflict), and a question that assessed screening intentions. Participants were followed by medical record for up to one year to examine whether there was a note documenting a discussion of the pros/cons of screening and to abstract receipt of mammography. We used the signed rank test and McNemar’s test to compare before/after responses. We also asked PCPs to complete a survey about using the DA in their practice.

Results: Forty-nine before/after trial participants (from 26 PCPs) had median age of 79 years; 70% were Non-Hispanic white; 63% had attended some college; and 24% had <7 year life expectancy. Comparison of “after” to “before” survey results found: 1) participants answered on average 1 more question correct (interquartile range 0-2) on the 10 item index from 6 to 7 questions correct, p<0.001; 2) decisional conflict declined by 4.8 points (range -10.2 to +4.7 points, mean DCS scores before=20.1, p=0.03); and 3) fewer participants intended to be screened (59% compared to 82% before, p=0.01). In the following 6 months, 61% of participants had a PCP note documenting a discussion of the pros/cons of screening compared to 10% in the previous 5 years, p<0.001. While 86% had been screened within 2 years before participating only 61% were screened within one year after, p<0.001 (a similar decline was found among women with <7 year life expectancy). Overall, 94% reported that they would recommend the DA, 94% found it helpful, and 78% found the amount of information just right. PCPs (17/26) reported that using the DA would result in their patients making more informed (74%) and value laden (79%) decisions.

Conclusions: We developed a DA for women aged >75 years contemplating mammography screening. Our before/after trial demonstrates that this DA allows women to make more informed, preference-sensitive decisions around mammography screening. Next, we plan to test the effectiveness of the DA in a large randomized control trial.
A randomized trial of a community health worker led intervention using HPV self-sampling to increase cervical cancer screening among minority women: Preliminary findings.

Olveen Carrasquillo¹, Brendaly Rodriguez¹, Erin N. Kobetz-Kerman¹; ¹. University of Miami, Miami, FL, United States.

Background: Cervical cancer disproportionately affects minority and immigrant women. Among this population, there are multiple barriers to Pap smear screening including knowledge, limited access to care and cultural norms. In 2012, the USPSTF noted that self sampling for the human papilloma virus (HPV) holds great promise as a screening strategy among hard to reach populations. We present preliminary findings from our ongoing randomized trial testing this approach in three minority communities in Miami.

Methods: The South Florida Center for Reduction of Cancer Disparities is a comprehensive NCI initiative aimed at reducing cervical cancer disparities in South Florida through community based participatory research. Using community health workers (CHWs) our community partners are recruiting 600 minority women ages 30-65 who had not had a Pap smear in the last three years into the study. Following a baseline intake, women are randomized into one of three arms. Group one receives culturally tailored cervical cancer education materials. Groups 2 and 3 receive a one hour CHW home health education session. CHWs subsequently refer and navigate women in group 2 to Pap smear screening at community based facilities that perform free or low cost testing. Women in group 3 have the option of Pap smear or doing HPV self sampling after a brief CHW instruction session. A research assistant blinded to study allocation performs a 6 month follow-up visit to assess screening status. A formal interim analysis was not part of the study design. However, we are able to present preliminary baseline data as well as follow-up status in Groups 2 and 3 based on CHWs logs. We do not include any hypothesis testing.

Results: To date, using various community outreach strategies, CHWs have assessed 2,601 women for study inclusion. Of these 515 are study eligible; most ineligibles are due to being screened already or age exclusion. Less than 5% of eligible women have declined to participate. Among the 280 women we have already randomized, 50% are Hispanic, 39% Haitian, and 11% African American. Over half are uninsured. Among the 70 women randomized to group 2 and having already received the educational session, 48% have obtained a subsequent Pap smear. Among the 64 women randomized to Group 3 who have received the education, 95% have been screened. Of these 69% preferred to have the HPV self-sampling at time of CHW session over being referred for a Pap smear. In Little Haiti, 10 of 21 (48%) HPV samples have been positive for high risk HPV versus 18% in the other two communities.

Conclusions: Using the CBPR framework, in a 14 month period we have been able to recruit and randomize almost half of our planned 600 “hard to reach” study population with almost no women refusing to participate. Our rates of Pap smear completion among women in group 2 compares very favorably with data from other similar CHW led programs. Our preliminary data also makes an extremely strong case for HPV self-sampling as a strategy for cervical cancer screening among unscreened minority women.
**Promoting Smoking Cessation after Hospital Discharge: the Helping HAND Randomized Controlled Comparative Effectiveness Trial**

Nancy A. Rigotti¹,², Sandra Japuntich¹, Susan Regan¹, Jennifer H. Kelley¹, Yuchiao Chang¹, Michele Reyen¹, Joseph C. Viana¹, Elyse R. Park², Douglas Levy², Molly Korotkin¹, Joanna Streck¹, Daniel E. Singer¹; 1. General Medicine Division, Massachusetts General Hospital, Boston, MA, United States. 2. Mongan Institute for Health Policy, Massachusetts General Hospital, Boston, MA, United States. 3. Boston VA Health Care System, Boston, MA, United States.

**Background:** Hospitalization provides an opportunity for smokers to quit. Smokers who quit after hospital discharge reduce their subsequent morbidity and mortality rates and might reduce their risk of readmission. Hospital-initiated tobacco treatment is effective only if it continues for more than 1 month after discharge. Sustaining the treatment of chronic conditions like tobacco dependence from hospital to home is a challenge for health care systems to accomplish. We tested a model system to facilitate the delivery of evidence-based smoking cessation counseling and medication to hospitalized smokers after hospital discharge.

**Methods:** A randomized controlled trial at 1 large urban teaching hospital compared 2 post-discharge treatments, Extended Care (EC) vs. Standard Care (SC), for smokers who were counseled during their hospital stay and wanted to quit smoking after discharge. EC provided 3 months of free medication of the patient's choice at discharge (nicotine replacement, bupropion, or varenicline) and 5 automated outbound interactive voice response (IVR) phone calls at 2, 14, 30, 60, and 90 days after discharge. IVR calls reminded smokers to stay quit, promoted medication adherence and offered medication refills and a return call from a live counselor for further support. SC patients were given advice to contact a free telephone quitline and use smoking cessation medication after discharge. Outcomes (use of treatment, smoking status, readmission rate) were assessed 1, 3, and 6 months post-discharge.

**Results:** 397 smokers who were admitted from 7/2010 to 4/2012 were randomly assigned to EC (n=198) or SC (n=199). Groups were comparable at baseline (49% male, 85% white, mean age= 52 y; mean cig/day=17). Follow-up rates were 91% (1 mo), 85% (3 mo), and 82% (6 mo). EC, compared to SC, increased smokers’ post-discharge use of pharmacotherapy (87% vs 66%, p<.001, at 1 mo; 91% vs. 73%, p<.001, at 3 mo) and counseling (41% vs 26%, p=.002 at 1 mo; 67% vs. 47%, p<.001 at 3 mo). EC, compared to SC, increased self-reported continuous abstinence at 1 mo (46% vs 34%, p=.010), 3 mo (34% vs 24%, p=.024), 6 mo (28% vs 16%, p=.007) after discharge and tobacco abstinence for the past 7 days at 1 mo (53% vs 40%, p=.011), 3 mo (46% vs 37%, p=.092), and 6 mo (42% vs 29%, p=.007) after discharge. Analysis of readmission rates is in process.

**Conclusions:** A multi-component telephone-based intervention designed to facilitate hospitalized smokers’ access to tobacco treatment after discharge improved the use of counseling and pharmacotherapy and increased smoking cessation rates for 6 months after hospital discharge. This promising model could be adopted by hospitals to provide post-discharge treatment and help meet tobacco quality of care standards.
Treatment Decisions Among Men With Low-Risk Prostate Cancer

Richard Hoffman¹, Stephen K. Van Den Eeden³, Amethyst Leimpeter³, Catherine Tomko², Kimberly Davis², Jun Shan³, Kathryn Taylor²; 1. Albuquerque VA Medical Center, Albuquerque, NM, United States. 2. Georgetown University, Washington, DC, United States. 3. Kaiser Permanente Northern California, Oakland, CA, United States.

Background: Prostate cancer screening can lead to overdiagnosing and overtreating low-risk prostate cancer (PCa). Active surveillance (AS) is an intensive monitoring strategy involving periodic PSA tests, digital rectal examinations, and prostate biopsies that offers active treatment (AT), either surgery or radiotherapy, only for evidence of cancer progression (or for patient request). Although AS mitigates the harms of prostate cancer screening without apparently compromising cancer control, it is not widely utilized. We assessed clinical and decision-making factors associated with selecting AS vs. AT.

Methods: In the first phase of a longitudinal cohort study, we conducted baseline telephone interviews with 116 (77% response rate) Kaiser Permanente Northern California men with newly diagnosed (median 23 days), low-risk PCa (PSA < 10, Gleason <7). Enrollment is ongoing with a target of 1470 subjects. Survey domains included socio-demographics, family history, decision-making processes and preferences, and general and disease-specific quality of life measures.

Results: Men were 61.7 (SD= 6.7) years old, 84% were white, 75% were married, 52% had completed college, and 57% were employed. By the time of the baseline assessment, 64% (N=74) had already made a treatment decision, including 28% selecting AS, 58% selecting AT (56% of whom selected surgery), and 14% selecting watchful waiting (no intention of undergoing curative treatment). Although the AS and AT groups had similar PSA (mean [SD] 5.7 [1.6] ng/mL vs. 6.0 ng/mL [1.6]) and Gleason scores (both 6), AT patients were younger (60.9 [5.2] vs. 63.5 [7.7], p< 0.08), had better physical function (p< 0.05), and were more likely to have relatives who died from PCa (26% vs. 3%, p< 0.05). Treatment groups did not differ on education, PCa knowledge, prostate-related symptoms, anxiety, or depression. AT recipients were more likely to have assumed primary responsibility for making the treatment decision (86% vs. 63%), to feel completely sure of their decision (79% vs. 42%), and to consider that actively treating the cancer was very important (72% vs. 52%), all p values < 0.05. Men selecting AS were more likely to engage in shared decision-making (29% vs. 12%, p < 0.05). Men selecting AT (65%) were far more likely than AS men (10%) to receive recommendations for AT, p < 0.05. Only 8 (19%) of the men selecting AT discussed AS.

Conclusions: Most men with low-risk PCa made treatment decisions within 30 days of diagnosis, usually selecting AT. Men selecting AT were more likely than those selecting AS to highly value active cancer treatment and to be quite certain of their decision. However, men selecting AT were less likely to engage in shared decision-making. Reducing unnecessary treatment for low-risk PCa will likely require providing balanced decision-support information very soon after—or even before—diagnosis.
Physicians' Propensity to Discuss Prognosis on Patients' Prognosis Awareness for Metastatic Lung or Colorectal Cancer

Michael Pang-Hsiang Liu1, Mary Beth Landrum1, Jane C. Weeks2, Haiden A. Huskamp1, Katherine L. Kahn3, Yulei He1, Jennifer W. Mack2, Nancy L. Keating1,4; 1. Department of Health Care Policy, Harvard Medical School, Boston, MA, United States. 2. Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, MA, United States. 3. Department of Medicine, University of California at Los Angeles, Los Angeles, CA, United States. 4. Department of Medicine, Brigham and Women’s Hospital, Boston, MA, United States.

Background: Understanding one's prognosis is essential for terminally-ill patients, as it will influence their treatment preferences. However, many patients have a limited awareness of their prognosis, and little is known about the impact of physicians' propensity to discuss prognosis on patients' prognosis awareness. We collected information from a large cohort of advanced-cancer patients and their physicians to explore the potential association of physicians' propensity to deliver prognostic information with patients' perceptions of their prognosis.

Methods: We investigated 686 patients with metastatic lung or colorectal cancer at diagnosis who participated in the Cancer Care Outcomes Research and Surveillance study, a multiregional population-based prospective cohort study of lung and colorectal cancer patients. We included patients who were alive and reported their life expectancy at the baseline interview conducted 3-6 months after diagnosis. Patient-reported life expectancy of ≤2 years for lung cancer and ≤5 years for colorectal cancer was considered generally accurate. These patients were linked with 486 doctors who were identified by these patients as filling important roles in their cancer care and responded to the physician survey. Physicians were asked to assume they were caring for an asymptomatic patient with a life expectancy of 4-6 months and report when they would initiate discussion about prognosis with this patient. Using multivariable logistic regression, we assessed whether patients of physicians who reported discussing prognosis “now” reported more accurate awareness of their life expectancy, adjusting for patient and physician characteristics.

Results: Few patients with metastatic cancers (16.5%) reported an accurate awareness of their prognosis. Patients whose most-important-doctor reported discussing prognosis with terminally-ill patients early were more likely than those whose doctors deferred these discussions to have an accurate prognosis awareness (adjusted proportion, 18.5% vs 7.6%; odds ratio, 3.23; 95% confidence interval, 1.39-7.52; P=0.006). Patients whose physician cared for more terminally-ill patients were more likely than other patients to report an accurate prognosis awareness. Individuals who died within 3 months after the interview were most likely to be aware of their prognosis, and those who lived more than 2 years were least likely to be (28.6% vs 9.8%; P<0.001).

Conclusions: Although few patients with advanced cancer reported an accurate prognosis awareness, physicians' propensity to discuss prognosis early was associated with more accurate reports of prognosis. This finding suggests that physicians' communication behaviors may play an important role in explaining the very low rate of prognostic understanding we observed among patients with incurable cancers. Some patients may be hindered from having an accurate understanding of their prognosis if the doctors whom they are relying on for their key decisions about their cancer tend to delay or are reluctant to discuss prognosis with them. Enhancing the communication skills of providers with important roles in cancer care may help to improve patients' understanding of their prognosis.